

as to elongate the head. In this way, a large child, and just dead, was removed, without cutting up either head or trunk, in a moderate time. We were present at the delivery, and cannot believe it possible that the child could have been drawn through the space given.

Cases 7-10.—Until quite recently, it was generally thought that the late Prof. Gibson performed the first Casarean operation in the United States that resulted in saving both mother and child; but we have in this paper shown that there were other cases in advance of Mrs. Raybold. We had the pleasure of seeing this remarkable woman on April 1st, and were glad to find her not only in good health, but looking several years younger than 69, which she recently reached. She is of slight frame, very erect, and measures 4 feet 8 inches; 2 inches more than in the published reports. As stated, the daughter (43) and son (40) are still living, and have four and two children respectively. The superior hygienic advantages enjoyed by the daughter over the mother, who was born in Ireland, have saved her from rickets, and any consequent parturient difficulty. Not one of the eight physicians present at the first operation, and but one of the six at the second, survives. It is remarkable that so small a woman should have survived two craniotomies and two Casarean sections, and lived to this time. The coolness, skill, and timely character of the operations of Dr. Gibson had much to do with her recovery; and her accoucheurs were prompt, and among the best of their day in any land.

713 LOCUST ST., May 16th, 1878.

ARTICLE V.

PELVIC AND ABDOMINAL ABSCESS. By CHARLES KELSEY, M.D., Assistant Demonstrator of Anatomy at the College of Physicians and Surgeons, New York.

SINCE the publication of the report of Dr. Parker's first operation for perityphlitis in 1866, supposed for some time to have been the first ever performed, the surgical treatment of this and allied forms of pelvic abscess by early incision has constantly grown in favour, and the notices of such operations have become so frequent, that a single one is now scarce worthy of publication. Among New York surgeons Sands, Wood, and Buck have each reported numerous successful ones, and the list has been increased by individual cases scattered through current literature, until the sum total is sufficiently large to place the desirability of this method of treatment in properly selected cases beyond the reach of discussion. For not every inflammation around the right iliac fossa needs the knife, and many of them have done very well in times gone by, and will in the future, under local antiphlogistic treatment.

Attempts, too, have been made from time to time to tabulate these cases, and draw from them some new facts, as to etiology, pathology, and

differential diagnosis, but with only partial success; for perityphlitis had been well studied, and its pathology well written, before these operations became common, and but little that is essential has been added to our knowledge in these particulars since the clinical lessons of Dupuytren and his accounts of *post-mortem* examinations.

Amongst recent writers, none have approached the subject in a more concise and scientific way than Bartholow (*American Journal Med. Sciences*, Oct. 1866), or W. T. Bull, in his prize inaugural thesis of the class of 1872, College of Physicians and Surgeons, New York. Bartholow's classification is the following:—

1. Abscess due to ulceration and perforation of the cæcum: the perforation being due (*a*) to the irritation of a foreign body; (*b*) to a perforating ulcer which may be situated either on the posterior surface and uncovered by peritoneum, or anteriorly and covered by peritoneum.
2. Abscess due to ulceration and perforation of the appendix: divided into (*a*) cases resulting from simple inflammation and abscess; and (*b*) those from a foreign body, which he estimates at three-quarters of the whole number of cases.
3. Abscess due to inflammation and suppuration of the sub-cæcal connective tissue.

This classification, with the further subdivisions which naturally suggest themselves, would seem to cover all cases of this disease properly connected with the cæcum or its appendix. For instance, to the simple varieties of ulceration must be added those due to typhoid fever and to the softening of tubercular deposits occurring in the appendix,¹ as well as in the cæcum itself; and to the whole museum of foreign bodies which have been found from time to time should be added the masses of hardened feces collecting in the caput coli, and acting as foreign bodies. Class 3 includes the cases of violence, the idiopathic inflammations, or those due to cold and strains; but we still have left the various collections of pus in this part which have no relation to the intestinal canal, and the exact diagnosis of which from true perityphlitis may at any time prove a matter of considerable difficulty; such as abscess following ulceration and perforation of the bladder,² acute inflammation of the right ovary with purulent pelvic effusion,³ psoas abscess, cancerous disease of abdominal or pelvic organs with purulent degeneration, disease of sacro-iliac articulation, abscesses after confinement, migration of pus from distant parts,⁴ etc.

The difficulty in diagnosis is one which Habershon⁵ has done something to elucidate; but from the nature of the case there must always be more

¹ Reynolds's Practice, vol. iii. Pathological Transactions, vol. xxvii. p. 127.

² Duplay. Archives Générales de Médecine, May, 1877.

³ Atlee. American Journal of Med. Sciences, July and October, 1877.

⁴ Buck. Abscess in the Lower Abdominal Cavity and its Parietes, 1876.

⁵ Guy's Hosp. Reports, 3d series, vol. xxii. 1877.

or less uncertainty. When a foreign body is found, the causation becomes apparent, though the point of origin of the inflammation may not; but when no such aid is given, it may still be impossible in any particular case to say more than that we have had to do with a pelvic abscess.

In my own practice during the past year, I have had three cases of deep-seated pelvic and abdominal abscess, differing as far as possible from each other in their cause, symptoms, and course, and presenting so many points of contrast, that I am led to hope they may be of general interest.

CASE I.—Boy, age 12; slight, and of delicate build, but generally well. Has had pain in abdomen for the last forty-eight hours. Pain on urination and defecation, and tenderness all over lower part of bowels, but without localization in any one point. Temp. 103° , pulse 130. Two soft evacuations from bowels yesterday.

Next day (third of disease) he "thought it hurt him more on the right than left side when he tried to stand up," and there was some dulness in the right fossa, but no swelling. Has vomited his milk once.

4th day. Marked vesical tenesmus and flatulence, occasional vomiting; condition otherwise unchanged.

5th day. Temperature has continued to range between 101° in the morning and 103° in the afternoon. Passed a very restless night, and begins to show signs of suffering. There is flatulence, but not as much distension of the abdomen; vomiting and vesical tenesmus continue. Has had no chill. The tenderness is now confined to the right fossa, and is greatest at a point half way between the anterior superior spine and the pubes, and above a line running from one anterior superior spinous process to the other, where a slight tumefaction can be made out by careful palpation. No superficial redness. Bowels have not moved since the first day. On consultation with Drs. Sabine and Bullard, it was decided that an operation was not immediately indicated, and the same treatment, quinia, morphia, wine, and fluid diet was continued.

Next day (sixth of disease) there was a marked relief of all symptoms, less pain, less tenderness, four free fluid evacuations from the bowels in rapid succession, fall in temperature and pulse, appetite better, and has had a good night's sleep.

From the sixth to the thirteenth day there was little change. The bowels moved daily, but always with more or less pain, and the appetite and strength returned in a measure; so that he was able to leave his bed. But the temperature from day to day showed the same increase above the normal, never falling below 100° ; and the pain and tenderness did not diminish. For a day or two the parents had remarked a peculiar bubbling noise, which they heard at times at the seat of the tumour, and on the twelfth day a part of the dulness was found to have been replaced by clear tympanitic resonance, and the diagnosis of communication between the bowel and tumour was made. On the thirteenth day he had a very free fluid and offensive discharge from the bowels (which the parents said contained pus), followed by a marked fall in temperature and diminution of the pain; and for the next two days was comparatively comfortable.

16th day, evening. Complaining of great pain, rolling and tossing in bed, and screaming with agony. Found him lying on his right side, legs drawn up, sphincter ani relaxed, mucous membrane slightly prolapsed, and a

small stream of clear mucus flowing from his anus and staining the bed; tenesmus very great.

Had passed a small amount of well-formed feces during the morning, and had been sitting up enjoying his supposed convalescence.

Digital examination of rectum revealed a hard tumour pressing upon and almost closing it, situated on the anterior wall, to the right, and behind the prostate. Large doses of morphia given to quiet him through the night.

At my visit next morning he was more comfortable, and the tenesmus had in part ceased. Had passed nothing per rectum. On turning him on his back I was surprised to see what appeared to be a greatly distended bladder reaching nearly to the umbilicus, and plainly marked out on the abdominal wall. He had passed his water twice during the night, he said, in small quantity, and was not suffering from it at all then. Stupes over the bladder brought away four ounces of urine (by measure), and caused the entire disappearance of the visible tumour; the dulness and hardness to the touch still remained from the pubes half way to the umbilicus. Under ether he was catheterized and three or four ounces more urine was withdrawn, entirely emptying the bladder. By careful examination the following condition was then made out: A firm, hard tumour in the pelvis toward the right side, the upper edge of which could be felt by deep pressure about half way between the pubis and umbilicus and the lower surface by a finger in the rectum, which could just be passed through the partly occluded gut beyond the mass to its upper limit. The mass could not be made to fluctuate by this conjoined manipulation, and the intestine over it gave resonance on percussion. A medium-sized aspirator needle thrust into the mass through the abdominal wall gave us a pint of fetid, greenish pus, and the point of the instrument could easily be felt by the finger in the rectum, nothing but the wall of the bowel seeming to separate them.

After about five days he was again etherized, and a free incision made into the tumour from the rectum, by which it was thoroughly emptied. The end of the index finger passed through the incision into a large abscess cavity, the boundaries of which could not be made out. Healing rapid and complete. One year after the operation the boy is still perfectly well.

The points of interest in this case are the following:—

1st Causation: Nothing like a foreign body could be found, though thoroughly sought after during the whole course of the discharge. No injury.

2d. Position: The first symptoms—pain on urination and defecation—pointed plainly to a site between the bladder and rectum, with a peritonitis extending from this point. Afterwards the swelling approached nearer the surface, and was most prominent not at the usual place for a case of perityphlitis, but further towards the umbilicus.

It was this position of the tumour which kept us from operating at the time of the consultation, as I should have done had the matter seemed nearer the iliac fossa. But, rising as it seemed to do from deeper in the pelvis, and gradually coming up to the surface, carrying the peritoneum before it, the point was raised by Dr. Sabine whether in case of incision

we might not empty the pus into the peritoneal cavity; and whether by waiting a few days longer a union of the two layers of peritoneum might not take place, and the danger of peritonitis be thus diminished.

I have little doubt in my own mind that the pus was beneath the pelvic fascia, and I believe that in all cases of perityphlitis the matter will be found outside the peritoneal cavity, not merely shut off from it by adhesions with surrounding organs, but in the sub-peritoneal connective tissue. This is a point on which the light of *post-mortem* examinations is much needed; for though it is generally stated that an abscess arising from an ulceration at a point covered by peritoneum either bursts directly into the peritoneal cavity and causes death, or is shut off from it by adhesions and becomes encysted, there are few of these later cases actually recorded, if any. (?) On the contrary, where the exact location of the matter is stated, it will generally be found under the peritoneum. In the first case of this kind I ever saw, one in which the man died unrelieved by any attempt at surgical aid, we found, *post-mortem*, a date-stone in the appendix, and a collection of pus which had worked its way from the right iliac fossa directly across the pelvis behind the pubes to the left, raising the peritoneum before it in its course—a case which might in all probability have been saved by proper treatment. And in my own first case of operation,¹ by passing our fingers through the incision it seemed very evident that the abscess cavity was beneath the peritoneum, though it is a delicate point to decide under such circumstances. But I observe the same ground has recently been taken by Dr. Sands,² and I remember hearing the late Dr. Krakowicz express himself very strongly in the same way in the discussion of a paper by Dr. Gurdon Buck,³ also deceased, who held to the contrary. However, we have better testimony than opinion on this point. Duplay, in his *Archives Générales de Médecine*, May, 1877, in describing the *post-mortem* of a man who died of pelvic abscess subsequent to ulceration and perforation of the bladder, says:—

“By these two incisions a large cavity was opened, occupying all the hypogastric region, containing putrid gas and a small quantity of dark, brownish fluid. This cavity, with irregular walls, was limited in front by the abdominal muscles partly destroyed and reduced to a black gangrenous mass; behind and above by a thick membrane of brown colour, gray in spots, covered by thick and adherent pus, presenting an uneven softened surface. This membrane, which completely separated the purulent collection from the intestines and the absolutely healthy peritoneal cavity, appeared to be constituted by the peritoneum itself separated from the abdominal muscles.”

And Dupuytren,⁴ describing the *post-mortem* of a case of true perityphlitis from perforation of the appendix, says:—

“The skin was perforated by four openings, which communicated with each other, and opened *together into a large cavity or pouch situated between the mus-*

¹ N. Y. Medical Record, vol. ix. p. 511.

² N. Y. Med. Record, Jan. 19, 1878.

³ Transactions of N. Y. Acad. of Med., series 2d, vol. ii. 1876.

⁴ *Lçons Orales*, vol. iii. page 522. Ed. of 1839.

cles of the abdominal wall and the external surface of the peritoneum." Also on the next page, in a similar case: "The opening of the cadaver showed a large pouch having its seat in the cellular tissue surrounding the cæcum, with its burrowings following the direction of the psoas and iliacus muscles."

There are many such descriptions, but I do not remember meeting any where the pus was described as encysted in the cavity of the peritoneum. It seems astonishing, in fact, what an amount of pressure and tearing-up from its place the peritoneum will bear from a collection of pus beneath it without becoming perforated.

Another point of great interest in this case was the prominence given to the bladder by so small an amount of urine (8 oz.), causing it to rise over the tumour nearly up to the umbilicus; and the diagnostic value of the continued rise in temperature, when in every other respect the patient seemed on the point of recovery, should not be lost sight of.

CASE II.—Susan M., aged 45, widow. Three years ago patient was operated upon for ovarian tumour. The site of the incision is occupied by a hernia the size of a closed fist.

For two or three years past she has had more or less pain in the region of the stomach and liver, and has several times been jaundiced. She describes several attacks which might be attributed to the passage of a gall-stone, and has been treated under this diagnosis; but for some time past the pain has been almost constant; there has been occasional vomiting and constipation, but no jaundice or sudden exacerbations in the pain.

At the time of my seeing her she was suffering greatly, but could not point out the exact seat of the pain, which seemed to be general over the abdomen. She was in good flesh; bowels confined; urine normal; appetite poor; vomiting occasional; some fever, and occasional slight chills. Physical examination revealed nothing. She was put upon alkaline treatment under the probable diagnosis of impacted gall-stone.

During the next three weeks I saw her daily. The pain sometimes ceased for a day or two, and then was as bad as before for a longer or shorter period. There was never any jaundice, and careful examination of the abdomen failed to reveal anything abnormal; the liver seemed to be about the right size, and was not tender on pressure; but the fever and occasional chilly feelings remained, and she gradually lost strength and flesh. At the end of that time she was received into St. Luke's Hospital, and for the remainder of the history I am indebted to Dr. Beauvelt, the present house physician.

For the next month there was little change in the condition; but at the end of that time a tumour was discovered in the right side of the abdomen below the liver, large, deeply seated, and tender to pressure; and she seemed to be sinking under the prolonged fever and suffering. After another month the tumour had burst at the site of the old cicatrix in the median line, and was discharging a large quantity of pus daily. A probe introduced at this point passed a long distance upward in the sheath of the rectus muscle. For a while it seemed as though the patient might rally, but she gradually ran down again, and finally died, worn out by the suppuration, about five months from the time I first saw her.

Autopsy.—Liver not much changed in size; gall-bladder stuffed full of a mass of calculi, which came out as one piece, but were separated into twenty-five different stones by washing. This mass had caused ulceration

and perforation of the gall-bladder, which communicated with a large abscess cavity under the liver and close to the diaphragm; and the pus from this abscess had burrowed upward along the diaphragm to the substance of the rectus muscle, and along this to the point of opening in the cicatrix of the old ovariectomy, about half way between the symphysis pubis and the umbilicus.

The next case is interesting, not so much on account of any difficulty in diagnosis as of the treatment, which was very successful, and which I should be much inclined to repeat should a similar occasion arise. I can easily see, however, how such a case occurring on the right side instead of the left, might be very difficult to diagnosticate from an abscess connected with the cæcum, or appendix, especially in such a case as the one reported by Kiwisch when the cyst contained fifteen pints of pus.¹

CASE III.—Mlle. L., age 26. Has been a constant sufferer from dysmenorrhœa. Unwell one week before my first visit, and while so, took a bath in the surf. Found her suffering great pain in the region of the left ovary, with some fever. Ordered rest in bed, with the usual applications, and in the course of four days she was able to come to my office, and a vaginal examination was made, revealing retroversion, chronic endometritis, and parametritis, with tenderness on pressure and manipulation both of the uterus and left ovary.

Next day there was a return of all the acute symptoms, caused possibly by the examination or by over-exertion on her part, and for about three weeks she was confined to her bed with constant fever, pain on urination and defecation, inability to extend the left thigh, which she kept constantly flexed on the abdomen, and great tenderness over the left ovary.

At the end of this time a thorough examination was made under ether, and a large mass of inflammatory exudation around the ovary easily made out by the finger in vagina or rectum. Into this mass an aspiration needle was plunged through the abdominal wall with one finger in the vagina to steady the tumour. The needle entered with considerable difficulty, owing to the hardness of the tissue, but at length passed into an evident cavity, and from this about half an ounce of good pus without offensive odour was withdrawn. The needle was then forced onward into the vagina with the idea of using it as a director upon which to make a counter opening at this point; but this was found to be so difficult to accomplish satisfactorily that it was finally withdrawn, and the opening into the vagina postponed for a future operation if necessary.

The relief to all symptoms was very marked. The abscess cavity never again filled, and after a couple of months' treatment by rest and hot injections, a retroversion pessary was introduced, and the patient was able to resume her ordinary occupations without discomfort.

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¹ Tanner. Signs and Diseases of Pregnancy, p. 164.